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09/883,817	06/18/2001	Jens Barrenscheen	GR 00 P 12246	2567

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EXAMINER

KNOLL, CLIFFORD H

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/883,817

Applicant(s)

BARRENSCHEEN ET AL.

Examiner

Clifford H Knoll

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-92 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9, 10. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown:

In claims 1, 24, 47, and 70, the “transmitting...” the “region defining a given time slot”, the “specific information”, the “settings selected from the group consisting of...” all must be shown in the drawings.

In claims 2-7, 9-23, 25-30, 32-46, 48-53, 55-69, 71-92, each and every recited feature is not shown in the drawings.

No new matter should be entered; otherwise the features should be canceled from the claim(s).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-92 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claims 1, 24, 47, and 70, the method and apparatus for forming the units, and for defining or determining settings has no basis for enablement in the specification. Instead the specification reintroduces the claims using such language as "the device is designed in such a way that the data to be transmitted can be transmitted...." (paragraphs [0047], [0048]) without specifying how such design is intended. While a description of frames, as disclosed in Figure 2, and claims 8, 31, 54, and 77 can be found in the specification, there is inadequate disclosure of the means by which units are formed "partly with at least one region defining a given time slot" (see claims 1 and 24).

The remaining claims introduce limitations that lack enablement in the specification. The specification is replete with reiteration of language recited in the claims, but lacking the supporting disclosure that would enable the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3, 11, 15-17, 19-21, 24, 26, 34, 38-40, 42-44, 46-92 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 24, the “devices transmitting no data” that “output onto the bus data” is unclear because it is not clear whether data is being transmitted. The “region” is unclear because its relationship to “units” has not been clearly established. The “devices enabled for outputting data” is unclear because its relationship with “first” and “second” and “devices transmitting no data” is unclear; it lacks antecedent basis. “setting which data representing information are to be output” is unclear because the structure being claimed cannot be discerned thereby. The “setting at which points in time” is unclear because it is not clear what is meant to be a setting.

In claims 3, 26, 49, and 72, the “with one or more of the devices” is unclear, because it is not clear what relationship is intended to the determining.

In claims 11, 34, 57, and 80, the “data to be transmitted and information required” is unclear because its relationship to the “data and information contained” is not clearly established.

In claims 15, 38, 61, and 84, the “exclusively devices for” is unclear because its use as a verb is not clear. “Are intended acknowledge the fault-free reception” is unclear because it is not clear what grammatical use is intended.

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In claims 16, 39, 62, and 85, the “output if appropriate” is unclear because it is not clear if a step is being implicitly claimed; steps must be positively recited.

In claims 17, 40, 63, and 86, the “do not output any data onto the bus” is unclear because it is not clear what is outputting or not outputting.

In claims 19, 42, 65, and 88, the “is intended to signal” is unclear, because it is not clear what device is being referenced.

In claims 20, 43, 66, and 89, the “output at the same time the negative acknowledge bits that are to output if appropriate” is unclear because it is not clear because it is not clear what structure is intended by appropriate outputting.

In claims 21, 44, 67, and 90, the “devices for which the data transmitted via the bus is not intended do not output any data onto the bus at least at the points in time at which the devices for which the data transmitted via the bus is intended must be able to signal the non-fault-free reception of the data” is unclear because it is not clear what is being recited.

In claim 46, the “of a specific preceding frame... or of a specific preceding frame” apparently recites redundant structure; it is not clear what meaning is intended.

In claims 47 and 70, the “setting determining which data...” is unclear because it is not clear what is being determined; the structure lacks clear recitation.

In claims 48-69, 71-92, method limitations are being recited in an apparatus claim. It is not clear what further limitations are intended for the apparatus recited as “device for connection to other devices via a bus” in the parent claims 47 and 70.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 48-69, 71-92 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims appear to recite both apparatus and method step limitations.

"[A] claim which is intended to embrace both product or machine and process is precluded by language of 35 USC 101, which sets forth statutory classes of invention in alternative only, and is also invalid under 35 USC 112, second paragraph, since claim which purports to be both machine and process is ambiguous and therefore does not particularly point out and distinctly claim subject matter of invention." (See *Ex parte Lyell* 17 USPQ2d 1548).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6, 8-29, 31-51, 53-74, 76-92 are rejected under 35 U.S.C. 102(e) as being anticipated by Deng (US 6347097).

Regarding claims 1 and 24, Deng discloses transmitting in units data from a first device to one or more second devices together with information (e.g., col.6, lines 34-40); forming units at least partly with at least one region defining a given time slot within which the devices transmitting no data can output data representing specific information (e.g., col.6, lines 29-32; Figure 4, "subaction gap"), defining in the enabled devices, settings selected from the group consisting of a setting to determine under which conditions data are to be output within the given time slot, a setting which data representing information are to be output within the given time slot and a setting at which points in time within the time slot the data are to be output (e.g., col.4, lines 47-52, "generation of a 'cycle' signal"; col.4, lines 55-57, "one node at a time").

Regarding claim 47 and 70, Deng discloses transmitting data with information where some of the units are formed with at least one region defining a time slot within which the device can output onto the bus data representing specific information (e.g., col.6, lines 34-40), determining settings selected from the group consisting of a setting to determine under which conditions data are to be output within the given time slot, a setting which data representing information are to be output within the given time slot and a setting at which points in time within the time slot the data are to be output (e.g., col.4, lines 47-52, "generation of a 'cycle' signal"; col.4, lines 55-57, "one node at a time").



Regarding claims 2, 25, 48, and 71, Deng also discloses determining settings before transmission (e.g., col.4, lines 47-52).

Regarding claims 3, 26, 49, and 72, Deng also discloses with one or more devices connected to the bus (e.g., col.3, lines 56-57).

Regarding claims 4, 27, 50, and 73, Deng also discloses determining settings based on one of data and instructions transmitted (e.g., col.4, lines 47-52).

Regarding claims 5, 28, 51, and 74, Deng also discloses determining settings upon initializing the devices (e.g., col.4, lines 47-52).

Regarding claims 6, 29, 52, and 75, Deng also discloses settings are variable settings (e.g., col.6, lines 29-34, "may then respond immediately if it already controls the bus").

Regarding claims 8, 31, 54, and 77, Deng also discloses frames (e.g., Figure 6).

Regarding claims 9, 32, 55, and 78, Deng also discloses messages (e.g., Figure 5, "acknowledge").

Regarding claims 10, 33, 56, and 79, Deng also discloses serial transmission at a clock rate (e.g., col.1, lines 39-40).

Regarding claims 11, 34, 57, and 80, Deng also discloses determining with the data and information contained in the units containing the data to be transmitted together with the information whether certain devices output information onto the bus at which points in time (e.g., col.4, lines 47-52, "generation of a 'cycle' signal"; col.4, lines 55-57, "one node at a time").

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Regarding claims 12, 35, 58, and 81, Deng also discloses determining with the data and information contained in units output (e.g., col.6, lines 29-32).

Regarding claims 13, 36, 59, and 82, Deng also discloses defining the given time slot for transmission of one or more bits (e.g., col.6, lines 34-40).

Regarding claims 14, 37, 60, and 83, Deng also discloses a positive acknowledge bit (e.g., col.7, lines 51-54).

Regarding claims 15, 38, 61, and 84, Deng also discloses acknowledging fault free reception by outputting a positive acknowledgement bit onto the bus (e.g., col.7, lines 51-54).

Regarding claims 16, 39, 62, and 85, Deng also discloses having to acknowledge fault free reception by outputting a positive acknowledge bit, the plurality set such that the positive acknowledge bits are output by the plurality of devices at different points in time if appropriate (e.g., Figure 4, "ACK").

Regarding claims 17, 40, 63, and 86, Deng also discloses devices for which the data is not intended do not output any data onto the bus at least at the points in time at which the devices for which the data transmitted via the bus is intended must be able to acknowledge the fault-free reception of data (e.g., Figure 4, "ACK GAP"; col.4, lines 55-57).

Regarding claims 18, 41, 64, and 87, Deng also discloses a negative acknowledge bit (e.g., col.7, lines 51-54).

Regarding claims 19, 42, 65, and 88, Deng also discloses exclusively devices for which the data transmitted via the bus is intended to signal non-fault free reception of the data (e.g., col.7, lines 51-54).

Regarding claims 20, 43, 66, and 89, Deng also discloses they have to signal the non-fault free reception of the data by outputting a negative acknowledge bit at least some of the plurality of the devices are set such that they output at the same time the negative acknowledge bits that are to be output if appropriate (e.g., col.6, lines 45-52, "ack-gap").

Regarding claims 21, 44, 67, and 90, Deng also discloses devices for which the data transmitted is not intended do not output any data (e.g., col.6, lines 49-52).

Regarding claims 22, 45, 68, and 91, Deng also discloses devices output positive acknowledge bits at different points in time or negative acknowledge bits at other different points in time (e.g., col.7, lines 51-54).

Regarding claims 23, 46, 69, and 92, Deng also discloses devices set such that a content of the current frame or of a specific preceding frame or the content of the current message determines which of the devices has to output which information onto the bus at which point in time (e.g., col.6, lines 3-12).

Thus are claims 1-6, 8-29, 31-51, 53-74, 76-92 rejected.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 30, 52, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng in view of Levy (US 6212633).

Regarding claims 7, 30, 52, 75, Deng does not expressly mention the implementational detail of a non-volatile memory device; however these devices are widely known and appreciated in the field for storing information, as exemplified by Levy. Levy discloses storing the settings relating to the given time slot in non-volatile memory devices (e.g., col.18, lines 4-13).

It would be obvious to combine Levy with Deng, because Levy teaches a particular use of non-volatile memory in the improvement of storing settings for transmitting data in a 1394 serial bus implementation, such as that taught by Deng. Therefore it would be obvious to one of ordinary skill in the art to combine Levy with Deng at the time the invention was made.

Thus are claims 7, 30, 52, and 75 rejected.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Transmitting in time slots data and information and defining settings to determine under which conditions data are to be output within the given time

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slot is a feature of the IEEE 1394 bus standard; a reasonable overview of the IEEE 1394-1995 standard can be found in IEEE 1394 Serial Bus Controller, Fujitsu, November 1996. Ghodrat (US 2002/0196806) discloses a serial bus with data and information transmitted in time slots with condition settings. Ben-Dor (US 2002/0141418) also discloses the same, with an explicit mention of the widely known teaching of storing the settings in non-volatile memory (e.g., paragraph [0202]).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 703-305-8656. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2100.

chk



XUAN M. THAI  
PRIMARY EXAMINER  
TC 2/00